

# **Risk Assessment and Risk Reduction for DIRECTIVE 2014/53/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

Applicant: Lumi United Technology Co., Ltd

Manufacturer: Lumi United Technology Co., Ltd

Product name: Dual Relay Module T2

Brand name: Aqara

Model name: DCM-K01

Software version: 0.0.0\_0023

Hardware version: x4

We Lumi United Technology Co., Ltd have performed the risk assessment procedure and found that our product in the case of a transmitter, when the transmitter is properly installed, maintained and used for its intended purpose it generates radio waves emissions that do not create harmful interference, while unwanted radio waves emissions generated by the transmitter (e.g. in adjacent channels) with a potential negative impact on the goals of radio spectrum policy should be limited to such a level that, according to the state of the art, harmful interference is avoided; and, in the case of a receiver, it has a level of performance that allows it to operate as intended and protects it against the risk of harmful interference, in particular from shared or adjacent channels, and, in so doing, supports improvements in the efficient use of shared or adjacent channels and also evaluated the health and safety risk and other aspects of public interest protection.

We have tried to avoid the risk by designing inherent benign, pre-testing against relevant requirement and adding more precaution steps to enhance the quality, also will adding warning statement in the relevant documents to avoid non-proper installation which will cause non- intended purpose or usage.

We also seek to the professional authority to test and evaluate our products to get the official certificate, which will prove that our product meet the relevant essential requirements, helping the user to understand that our product is low risk.

## Risk Analysis

	<b>Risk Item</b>	<b>Analysis</b>
<b>Environmental Condition</b>	1 Operating Temperature-10°C ~40 °C	Meet the requirement of User manual
	2 Operating Humidity 0% ~ 95%	Meet the requirement of User manual
	3 Operating Voltage AC 100-250V DC 24-30V DC 30-60V	Meet the requirement of manufacturer's design
	4 Intended Used	Office or Home used
<b>RF (zigbee)</b>	1 Maximum transmit power	Meet the requirements of Test Standards ETSI EN300 328 V2.2.2
	2 Power Spectral Density	Meet the requirements of Test Standards ETSI EN300 328V2.2.2
	3 Duty Cycle, Tx-sequence, Tx-gap	Meet the requirements of Test Standards ETSI EN300 328V2.2.2
	4 Medium Utilisation (MU) factor	Meet the requirements of Test Standards ETSI EN300 328V2.2.2
	5 Occupied Channel Bandwidth	Meet the requirements of Test Standards ETSI EN300 328V2.2.2
	6 Transmitter unwanted emissions in the out-of-band domain	Meet the requirements of Test Standards ETSI EN300 328V2.2.2
	7 Transmitter unwanted emissions in the spurious domain	Meet the requirements of Test Standards ETSI EN300 328V2.2.2
	8 Receiver spurious emissions	Meet the requirements of Test Standards ETSI EN300 328V2.2.2
	9 Receiver Blocking	Meet the requirements of Test Standards ETSI EN300 328 V2.2.2
<b>EMC</b>	1 EMI Performance	Meet the requirements of Test Standards ETSI EN 301 489-1 V2.2.3(2019-11) ETSI EN 301 489-17 V3.2.4(2020-09) EN 55032:2015+A11:2020 EN 55035:2017+A11:2020
	2 EMS Performance	Meet the requirements of Test Standards ETSI EN 301 489-1 V2.2.3(2019-11) ETSI EN 301 489-17 V3.2.4(2020-09) EN 55032:2015+A11:2020 EN 55035:2017+A11:2020
	3 Under Vehicular Environment	Meet the requirements of Test Standards
<b>Safety</b>	1 Electric Shock Hazards	Inherent Regulating Network Protected (Meet Test Standard EN IEC 60669-2-1:2022+A11; EN 60669-1:2018 BS EN IEC 60669-2-1:2022+A11; BS EN 60669-1:2018
	2 Mechanical Hazards	Inherent Regulating Network Protected (Meet EN IEC 60669-2-1:2022+A11; EN 60669-1:2018 BS EN IEC 60669-2-1:2022+A11; BS EN 60669-1:2018
	3 Fire Hazards	Inherent Regulating Network Protected (Meet Test Standard EN IEC 60669-2-1:2022+A11; EN 60669-1:2018 BS EN IEC 60669-2-1:2022+A11; BS EN 60669-1:2018

<b>RF Exposure</b>	4	RF Health	Fulfilled the requirements of Test Standards EN 50665:2017
--------------------	---	-----------	---

After evaluation, our product is found to satisfy all the technical regulations applicable to the product within the scope of Council Directives2014/53/EU , according to 3.1a, 3.1b and 3.2 of the Directive. Some Harmonized Standard have not published, based on the Non-Harmonized Standard and evaluated by NB, when the harmonized standards published, we will renew them.

### **List of the Followed Test Standards for Assessment of RED Requirement**

EN IEC 60669-2-1:2022+A11;  
 EN 60669-1:2018  
 BS EN IEC 60669-2-1:2022+A11  
 BS EN 60669-1:2018  
 EN 50665:2017  
 EN 55032:2015+A11:2020  
 EN 55035:2017+A11:2020  
 ETSI EN 301 489-1 V2.2.3(2019-11)  
 ETSI EN 301 489-17 V3.2.4(2020-09)  
 ETSI EN 300328 V2.2.2

Yours sincerely,

Signed by or for the Applicant:

Name (in print): Bella Lai  
 Date: July 14, 2023  
 Title: Certification Engineer  
 Tel: 0755-86635126 Fax: 0755-86635126  
 Email: yulian.lai-a1267@aqara.com

*Bella Lai*